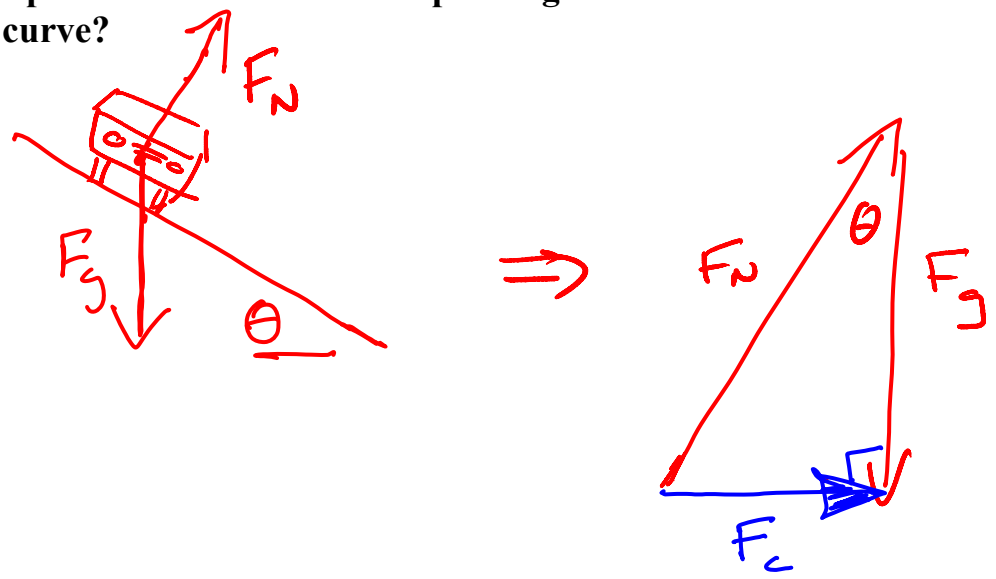
Example #9: A curve of 30 m radius is banked so that a car may make a turn at a speed of 13 m/s without depending on friction at all. What is the slope of the curve?



$$\frac{F_c}{F_g} = \tan\theta \qquad \frac{mv^2/r}{mg} = \tan\theta$$

$$\frac{13^2}{30(9.8)} = \tan\theta$$

$$\boxed{\theta = 30^\circ}$$